

Claims

[c1] What is claimed is:

1. An image decoding apparatus utilized for decoding a compressed file, comprising:

a central processing unit (CPU) which receives a compressed file;

a compressed file decoder which receives the compressed file outputted from the CPU, generates a decoded image data and encodes the decoded image data to generate a digital video signal;

a frame buffer connected to the compressed file decoder for storing the decoded image data; and

an analog video encoder which receives the digital video signal and converts the digital video signal into a TV signal.

[c2] 2. The image decoding apparatus of claim 1, wherein the compressed file decoder provides an operation mode through which the decoded image data is transmitted back to the CPU.

[c3] 3. The image decoding apparatus of claim 1, wherein the compressed file decoder provides an operation mode through which the CPU accesses the frame buffer.

- [c4] 4. The image decoding apparatus of claim 1, wherein the compressed file is a JPEG file.
- [c5] 5. The image decoding apparatus of claim 1, wherein the TV signal conforms to the NTSC standard.
- [c6] 6. The image decoding apparatus of claim 1, wherein the TV signal conforms to the PAL standard.
- [c7] 7. The image decoding apparatus of claim 1, wherein the compressed file decoder comprises:
a decoder core utilized for receiving the compressed file and producing a frame composed of a plurality of minimum coded units for the compressed file;
an adjusting operation unit utilized for selecting a shown range in the frame, applying a resize operation or a rotation operation on the shown range, and then converting the shown range on which the resize operation or the rotation operation has been performed into the decoded image data; and
a digital video encoder utilized for reading the decoded image data stored in the frame buffer and encoding the decoded image data to generate the digital video signal.
- [c8] 8. The image decoding apparatus of claim 7, wherein the adjusting operation unit comprises:
a crop unit utilized for selecting the shown range in the

frame; and

a resize unit utilized for applying a resize operation or a rotation operation on the shown range and generating the decoded image data.

[c9] 9. The image decoding apparatus of claim 7, wherein the decoder core is a JPEG decoder core.

[c10] 10. The image decoding apparatus of claim 7, wherein the digital video encoder is an ITU-R656 digital video encoder.

[c11] 11. An image decoding apparatus utilized for decoding a compressed file, comprising:
a decoder core utilized for receiving a compressed file and producing a frame composed of a plurality of minimum coded units for the compressed file;
an adjusting operation unit utilized for selecting a shown range in the frame, applying a resize operation or a rotation operation on the shown range, and then converting the shown range on which the resize operation or the rotation operation has been performed into a decoded image data;
a frame buffer utilized for storing the decoded image data; and
a digital video encoder utilized for reading the decoded image data stored in the frame buffer and encoding the

decoded image data to generate a digital video signal.

- [c12] 12. The image decoding apparatus of claim 11, wherein the adjusting operation unit comprises:
a crop unit utilized for selecting the shown range in the frame; and
a resize unit utilized for applying a resize operation or a rotation operation on the shown range and generating the decoded image data.
- [c13] 13. The image decoding apparatus of claim 11 further comprising a CPU utilized for receiving the compressed file and transmitting the compressed file to the decoder core.
- [c14] 14. The image decoding apparatus of claim 11 further comprising an analog video encoder utilized for receiving the digital video signal and converting the digital video signal into a TV signal.
- [c15] 15. The image decoding apparatus of claim 14, wherein the TV signal conforms to the NTSC standard.
- [c16] 16. The image decoding apparatus of claim 14, wherein the TV signal conforms to the PAL standard.
- [c17] 17. The image decoding apparatus of claim 11, wherein the decoder core is a JPEG decoder core.

[c18] 18. The image decoding apparatus of claim 11, wherein the digital video encoder is an ITU-R656 digital video encoder.